

Family list

1 family member for:

GB342933

Derived from 1 application.

§ Improvements in or relating to street orderly trucks and the like

Publication Info: **GB342933 A** - 1931-02-12

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PATENT SPECIFICATION

542,933



Application Date: March 11, 1930. No. 7820 / 30.

Complete Left: Dec. 9, 1930.

Complete Accepted: Feb. 12, 1931.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Street Orderly Trucks and the like.

I, GEORGE WILLIAM POPE, of 73, Killyon Road, Clapham, London, S.W. 8, a British Subject, do hereby declare the nature of this invention to be as follows:—

This invention relates to street orderly trucks and the like and has among its objects to provide an improved construction of truck which is more easily handled and of greater capacity than the orderly trucks at present in use, and which is also hygienic, inasmuch as road sweepings and other refuse inserted into the body of the truck are always completely shielded, even when further sweepings or refuse are being inserted, the improved truck furthermore dispensing with the necessity of hinged or other lids requiring to be opened each time sweepings or refuse are discharged into the truck.

According to the present invention, the improved truck comprises a receptacle of suitable size and shape mounted upon wheels, and preferably upon a wheeled cradle or under-carriage, the receptacle having at one end a transversely extending trough which is open at the top and is arranged to discharge into the upper part of the receptacle through an opening in the end wall thereof, a rotary bladed member which may be driven from the road wheels being arranged in the opening or in the trough or chute in a manner similar to a revolving door, so that while rotation of the said member enables sweepings, refuse or the like inserted into the trough or chute to be discharged into the receptacle, the contents of the receptacle are not freely accessible to the open-air and thus cannot be blown about by wind, or otherwise dislodged while the truck is in use or in transit. Preferably the rotatable bladed member is driven from one of the road wheels by means of a band, chain or the like so that as soon as the truck is moved after refuse has been inserted into the trough or chute the bladed member is rotated to discharge such refuse into the receptacle. The bladed member may be so geared to the road wheel that it rotates at a suitable speed so as to throw the inserted refuse towards the opposite end of the truck. Alternatively, however,

the rotatable member may be freely mounted and so arranged that refuse or the like inserted into the trough or chute causes the rotation of the bladed member, permitting the refuse to fall into the receptacle. If desired, a curved shield may be arranged to extend within the receptacle from the top of the opening in the end wall thereof so that the blades of the bladed member co-operating with such shield and with the curved bottom of the trough or chute at all times prevent the direct passage of air and dust into or from the receptacle. Conveniently, the end wall of the receptacle fitted with the trough or chute is removable for the purpose of discharging the receptacle when full, while the top of the receptacle may, if desired, have a hinged lid, both the removable end wall and the hinged lid advantageously being held in the closed position by means of rod and cam devices ensuring a tight closure.

In carrying the invention into effect according to one construction, the improved orderly truck comprises a supporting cradle, preferably constructed of metal bars welded together. For example, the cradle may consist of a pair of parallel main bar members forming the base of the cradle welded at intermediate positions in their length to a main transverse bar of substantially U-shaped formation, upwardly, extending bars welded to the rear ends of the main base bars and U-shaped members connecting the upper ends of the rear upright bars and the upper ends of the main transverse bar, and also connecting the upper ends of the main transverse bar with the front ends of the parallel base bars. Each of the vertical limbs of the main transverse member carries a road wheel mounted in any suitable manner. In one construction, each road wheel is carried by a stub axle fitted to the lower end of a short arm pivoted to the respective vertical arm of the main transverse member, such pivoted arm having a downward projection offset at an angle with respect to the axis of the pivoted arm and engaging between a pair of resilient rubber or other blocks or springs mounted in a hollow bracket or the like fixed to

[Price 1/-]

the vertical arm of the main transverse member of the cradle, thereby providing a resilient or shock-absorbing suspension for the road wheel. A small trailing 5 wheel is provided at the rear, such wheel being mounted in a forked fitting fixed to and connecting the rear ends of the parallel base bars of the cradle. The parallel disposed vertical members at the 10 rear of the cradle may be provided with upper and lower pairs of lugs for the reception of a handle of any suitable form, the upper pair of lugs preferably being split and provided with clamping bolts 15 and nuts so that the handle may be adjusted as to height as required.

The receptacle is formed with a channel-like or semi-cylindrical bottom adapted to sit securely in the cradle, the receptacle 20 preferably being of such length that its centre of gravity lies behind the axis of the road wheels, while its front end projects beyond the front of the said wheels. The receptacle, which is of a width to fit 25 between the side members of the cradle, preferably is bolted in position but can be readily detached and removed from the cradle for the purpose of maintenance and repairs.

30 The front end wall of the receptacle is removable and is constituted by a lower half portion forming a closure and an upper outwardly projecting trough-like portion provided with side walls arranged 35 to engage between the side walls of the receptacle when the end wall is in position. The lower portion of the end wall is formed with a peripheral flange or channel arranged to engage over a flanged 40 or beaded peripheral edge portion of the sides and bottom of the receptacle, and the end wall is held fixedly in position by a clamping device adapted to afford a tight closure. For this purpose a trans- 45 verse rod may be mounted in lugs or slotted bearings projecting forwardly from the end wall, such rod being fitted with cams bearing, for example, against the flanged lateral edges of the end wall, a 50 pair of arms being pivoted to the receptacle at suitable positions and being provided with hooks for engaging with the projecting ends of the rod so that when the rod is turned by means of a centrally 55 disposed operating lever, the cams act to force the rod outwardly in relation to the end wall so as to draw the latter tightly against the respective flanged edges of the receptacle.

60 It will be understood that the forwardly projecting trough provides a transverse rectangular opening at the front upper part of the receptacle and in this opening a transversely extending rotatable bladed member, similar to a paddle wheel, is

mounted, the arrangement being such that when the top blade of the member is vertical so as to obstruct the upper part of the opening, another blade co-operates with the curved lower part of the trough 70 to obstruct the lower part of the opening, a curved shield being provided, if desired, to extend rearwardly from the top edge of the opening over the bladed member, which may have, for example, three 75 blades, so that the receptacle is never in direct communication with the atmosphere through the opening referred to. The spindle of the bladed member projects at one side and is fitted with a 80 pulley, chain sprocket or the like by which it may be driven by means of a belt, chain or the like from a corresponding pulley or sprocket fixed to the respective road wheel. The top of the receptacle, 85 which is preferably hinged along one side, advantageously is fitted at the front end with a vertically extending shield or baffle which ensures that the refuse shall be directed into the trough and not upon the top of the receptacle. The hinged lid referred to may be held in the closed position by providing at the free side two spaced lug members forming upwardly directed channel-like rests for engagement 90 with cams fixed upon a spindle carried by a pair of arms pivoted to the respective side wall of the receptacle, the spindle being provided at one end or at any other suitable position with a lever arm by 95 which it may be turned so as to force the cams into engagement with the lugs referred to to press the lid tightly down upon its seating. The hinged lid may be fitted with clips, rests or other members 100 for the reception of shovels, brooms squeegees and other implements which may be required.

In the use of the device hereinbefore described, road sweepings or other refuse 105 collected in the usual manner are shot or thrown into the trough, which it will be understood is always open and consequently readily accessible, at the front of the truck, and then when the truck is 110 moved forward, or even backwards, the rotation of the bladed member obstructing the opening into the receptacle permits the refuse to pass into the receptacle 115 and serves to distribute it towards the 120 rear end of the latter.

It will be understood that the invention is not limited to the particular details of construction hereinbefore described. Thus, any other suitable construction of 125 cradle or wheeled carriage may be utilised, while in place of driving the rotatable member from the road wheels, it may be rotated by hand or merely may be freely rotatable as before described by 130

the weight of refuse or the like inserted into the trough or chute. Furthermore, the road wheels may be mounted and sprung in any other suitable manner, 5 while the means for fastening the removable and hinged members of the receptacle may be modified as desired.

Dated this 11th day of March, 1930.

F. J. CLEVELAND & Co.,
29, Southampton Buildings,
Chancery Lane, London, W.C. 2.
Agents for the Applicant.

COMPLETE SPECIFICATION.

Improvements in or relating to Street Orderly Trucks and the like.

I, GEORGE WILLIAM POPE, of 73, Killyon Road, Clapham, London, S.W. 8, 10 a British Subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

15 This invention relates to street orderly or hand trucks and the like for the collection or transport of refuse or dusty materials, and has among its object to provide an improved construction of truck 20 or the like for this purpose whereby road sweepings and other refuse or materials inserted into the body of the truck may be completely shielded, even when further sweepings or refuse or materials are being 25 inserted, the improved truck or the like furthermore dispensing with the necessity of opening hinged or other lids each time sweepings or refuse or materials are inserted into 30 the truck, and being more easily handled and of greater capacity than the orderly trucks at present in use.

It has before been proposed to provide a dust-cart with a cover consisting of a 35 cylindrical drum containing a paddle wheel which is freely rotatable, the upper part of the drum being fitted with a chute through which the dust or refuse is emptied on to the paddles, while the lower 40 part of the drum has an outlet communicating with the interior of the cart, the paddles serving to seal the inlet passage and being rotated if necessary by the provision of crank handles upon the spindle 45 of the paddle wheel. It has further been proposed to provide a motor driven dust-cart in which the refuse is emptied into a chamber containing a rotor or rotors which act to throw the refuse into the 50 interior of the cart, the rotor or rotors being driven from the engine of the vehicle.

According to the present invention a street orderly or hand truck for the collection of dust and refuse, having or comprising a closed or covered receptacle for the dust, refuse or other material, is pro-

vided with one or more charging devices each comprising a rotary bladed member which is driven from the road wheel or wheels and is so arranged in relation to a charging trough, hopper or opening, that the rotation of the said member when the truck is moved serves to discharge dust, refuse or other material inserted into the trough, hopper or opening, into the closed or covered receptacle, and that the contents of the receptacle are normally shut off from the open air. The bladed member may be so geared that it rotates at a suitable speed to throw the inserted dust, refuse or other material towards the opposite end or side of the truck or otherwise to distribute the same more or less evenly in the receptacle. Preferably, the bladed member is arranged to co-operate with a curved shield or wall or the like so that the blades of the member at all times shut off direct communication between the interior of the receptacle and the outer air. A removable receptacle may be provided in the truck or the like, such receptacle having one or more lids or closure members adapted when the receptacle is inserted into the truck or the like to be opened, and to be closed when, or preferably before, the receptacle is withdrawn from the truck or the like. The end or side wall and/or top of the truck or the like may be removable or hinged as desired, and may be held in the closed position by means of rod and cam devices or the equivalent ensuring a tight closure while the device is in use. An orderly truck according to the invention conveniently comprises a receptacle of suitable size and shape mounted upon wheels and preferably upon a wheeled cradle or under-carriage, the receptacle having at one end a transversely extending trough which is open at the top and is arranged to discharge into the upper part of the receptacle through an opening in the end wall thereof in which opening the rotary bladed member driven from the road wheel or wheels is located. The rotary

bladed member advantageously has three symmetrically arranged blades but may have only two blades or more than three blades as desired.

5 The invention is hereinafter described by way of example with reference to the accompanying diagrammatic drawing, in which:—

10 Figure 1 is a sectional side elevation of a hand orderly truck according to the invention;

Figure 2 is a plan view corresponding to Figure 1; and

15 Figure 3 is a front elevation corresponding to Figure 1 with the end closure member removed.

In carrying the invention into effect according to one construction, and with reference to the accompanying diagrammatic drawing, the improved orderly truck comprises a supporting cradle, preferably constructed of metal bars welded together. For example, the cradle may consist of a pair of parallel main bar members 1 forming the base of the cradle welded at intermediate positions in their length to a main transverse bar 2 of substantially U-shaped formation, upwardly extending bars 2a welded to the rear ends 20 of the main base bars and U-shaped members 4 connecting the upper ends of the rear upright bars and the upper ends of the main transverse bar, and also members 4a connecting the ends of the member 4 with the front ends of the parallel base bars 1. Each of the vertical limbs of the main transverse member 2 carries a road wheel 3 mounted in any suitable manner. In one construction, each road wheel 3 25 is carried by a stub axle 3a fitted to the lower end of a short arm 3b pivoted to the respective vertical arm of the main transverse member 2, such pivoted arm 3b having a downward projection 3c offset 30 at an angle with respect to the axis of the pivoted arm 3b and engaging between a pair of resilient rubber or other blocks or springs 4b mounted in a hollow bracket 5 or the like fixed to the vertical arm of 35 the main transverse member 2 of the cradle, thereby providing a resilient or shock-absorbing suspension for the road wheel 3. A small trailing wheel 6 is provided at the rear, such wheel being 40 mounted in a forked fitting 6a fixed to and connecting the rear ends of the parallel base bars 1 of the cradle. The parallel disposed vertical members 2a at the rear 45 of the cradle may be provided with upper 50 and lower pairs of lugs 2b for the reception of a handle 7 of any suitable form, the upper pair of lugs 2b preferably being split and provided with clamping bolts and nuts so that the handle 7 may 55 be adjusted as to height as required.

The receptacle 8 is formed with a channel-like or semi-cylindrical bottom adapted to sit securely in the cradle, the receptacle preferably being of such length that its centre of gravity lies behind the 70 axis of the road wheels 3, while its front end projects beyond the front of the said wheels 3. The receptacle 8, which is of a width to fit between the side members of the cradle, preferably is bolted in position but can be readily detached and removed from the cradle for the purpose of maintenance and repairs.

75 The front end wall 8a of the receptacle 8 is removable and is constituted by a lower half portion forming a closure and an upper outwardly projecting trough-like portion 8b provided with side walls 8c arranged to engage between the side walls 8d of the receptacle when the end wall 8a is in position. The lower portion of the end wall 8a is formed with a peripheral flange or channel 8e arranged to engage over a flanged or beaded peripheral edge portion 8f of the sides and bottom of the receptacle 8, and the end wall 8a is held fixedly in position by a clamping device adapted to afford a tight closure. For this purpose a transverse rod 9 may be mounted in lugs or slotted bearings 9a projecting forwardly from the end wall 8a, such rod being fitted with cams 9b bearing, for example, against the flanged lateral edges of the end wall 8a, a pair of arms 10 being pivoted to the receptacle 100 8 at suitable positions and being provided with hooks for engaging with the projecting ends of the rod 9 so that when the rod 9 is turned by means of a centrally disposed operating lever 9c, the 105 cams 9b act to force the rod 9 outwardly in relation to the end wall 8a so as to draw the latter tightly against the respective flanged edges of the receptacle 8.

110 It will be understood that the forwardly projecting trough 8b provides a transverse rectangular opening 8g at the front upper part of the receptacle 8, and in this opening a transversely extending rotatable bladed member 11, similar to a paddle 115 wheel, is mounted, the arrangement being such that when the top blade of the member is vertical, or substantially so, so as to obstruct the upper part of the passage 8h, another blade co-operates with the 120 curved lower part of the trough 8b to obstruct the lower part of the passage 8h, a curved shield 8i being provided, if desired, to extend rearwardly from the top edge of the opening 8g over the bladed 125 member 11, which may have, for example, three blades, so that the receptacle 8 is never in direct communication with the atmosphere through the opening 8g referred to. The spindle 11a of the bladed 130

member 11 projects at one side and is fitted with a pulley, chain sprocket 11b or the like by which it may be driven by means of a belt, chain 12 or the like from a corresponding pulley or sprocket 13 fixed to the respective road wheel 3. The top 8j of the receptacle 8, which is preferably hinged along one side, advantageously is fitted at the front end with a 10 vertically extending shield 8k or baffle which ensures that the refuse shall be directed into the trough 8b and not upon the top 8j of the receptacle 8. The hinged lid 8j referred to may be held in the 15 closed position by providing at the free side two spaced lug members 14 forming upwardly directed channel-like rests for engagement with cams 15 fixed upon a spindle 15a carried by a pair of slotted lugs 15b fixed to the respective side wall 20 of the receptacle 8, the spindle 15a being provided at one end or at any other suitable position with a lever arm 15c by which it may be turned so as to force the 25 cams 15 into engagement with the lugs 14 referred to to press the lid 8j tightly down upon its seating. The hinged lid 8j may be fitted with clips 8m, rests or other members for the reception of shovels, 30 brooms, squeegees and other implements which may be required.

If desired, the receptacle 8 may be fitted with a removable receptacle 16, the upper edge of which extends somewhat below the lower portion of the trough 8b. This removable receptacle 16 preferably is provided with hinged lids or covers 16a adapted to be raised and lowered as by the provision of handles 16b arranged at 40 the front of the apparatus so that when the receptacle 16 has been inserted, the lids or covers 16a may be turned up to the position shown in Figure 3 so that the dust, refuse or other material introduced 45 into the trough 8b may be thrown by the bladed member 11 directly into the receptacle 16, the lids or covers 16a being closed down before the receptacle 16 is removed from the receptacle 8. If desired, means may be provided for distributing the collected dust, refuse or the 50 like evenly along the length of the receptacle. Such means may comprise a rod or other member mounted to slide longitudinally of the truck, such rod having a handle projecting at one end of the truck and prongs or the like for spreading the dust, refuse or the like within the receptacle. The truck is preferably made 55 wholly of metal and the receptacle 8 and the cradle or under-carriage may be constructed in one unit.

In the use of the device hereinbefore described, road sweepings or other refuse 60 collected in the usual manner are shot

or thrown into the trough, when it will be understood is always open and consequently readily accessible, at the front of the truck, and then when the truck is moved forward, or even backwards, the 70 rotation of the bladed member obstructing the opening into the receptacle permits the refuse to pass into the receptacle and serves to distribute it towards the rear end of the latter.

It will be understood that the invention is not limited to the particular details of construction hereinbefore described. Thus, any other suitable construction of cradle or wheel carriage may be utilised. Furthermore, the road wheels may be mounted and sprung in any other suitable manner, while the means for fastening the removable and hinged members of the receptacle may be modified as desired. 75

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A street orderly or hand truck for the collection of dust or the like and having or comprising a closed or covered receptacle for the dust or the like, wherein one or more charging devices is or are provided each of which comprises a rotary bladed member which is driven from the road wheel or wheels and is so arranged in relation to a charging trough, hopper or opening that when the truck or the like 100 is moved the rotary bladed member discharges the dust or the like inserted into the trough, hopper or opening into the closed or covered receptacle. 95

2. A street orderly truck, dust-collecting cart or the like, as claimed in Claim 1, wherein the rotary bladed member is so geared to the road wheels and so arranged that when the truck is moved forward the inserted dust, refuse or other 110 material is thrown towards the opposite end or side of the truck or otherwise distributed more or less evenly in the receptacle. 105

3. A street orderly truck, dust-collecting cart or the like, as claimed in Claim 1 or in Claim 2, wherein the rotary bladed member is arranged to co-operate with a curved shield or wall or the like, for the purpose described. 115

4. A street orderly truck, dust-collecting cart or the like, as claimed in any of the preceding claims, wherein the receptacle is provided with a removable end wall, for the purpose of discharging the 125 receptacle. 120

5. A street orderly truck, dust-collecting cart or the like, as claimed in Claim

4. wherein the end wall comprises the trough, hopper or the like or the outer portion thereof.

5. A street orderly truck, dust-collecting cart or the like, as claimed in any of the preceding claims, wherein the truck or the like is provided with a removable receptacle having hinged lids or covers adapted to be closed before the receptacle

10 is removed.

6. A street orderly truck, as claimed in any of the preceding claims, comprising a receptacle of suitable size and shape mounted upon wheels or upon a wheeled 15 cradle or under-carriage, the receptacle having at one end a transversely extending trough which is open at the top and is arranged to discharge into the upper part of the receptacle through an opening 20 in an end wall thereof, in which opening a rotary bladed member driven from the road wheel or wheels is located.

8: A street orderly truck, dust-collecting cart or the like, as claimed in any of the preceding claims, wherein the rotary bladed member is provided with three 25 symmetrically arranged blades.

9. The improved means for charging street orderly trucks and the like, substantially as hereinbefore described with 30 reference to the accompanying diagrammatic drawing.

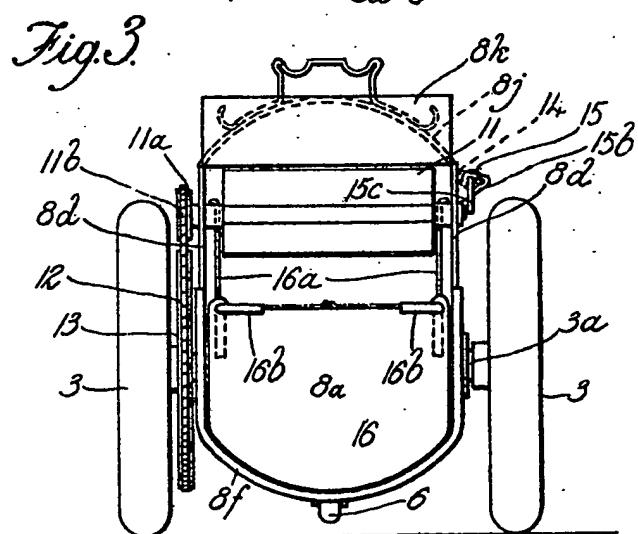
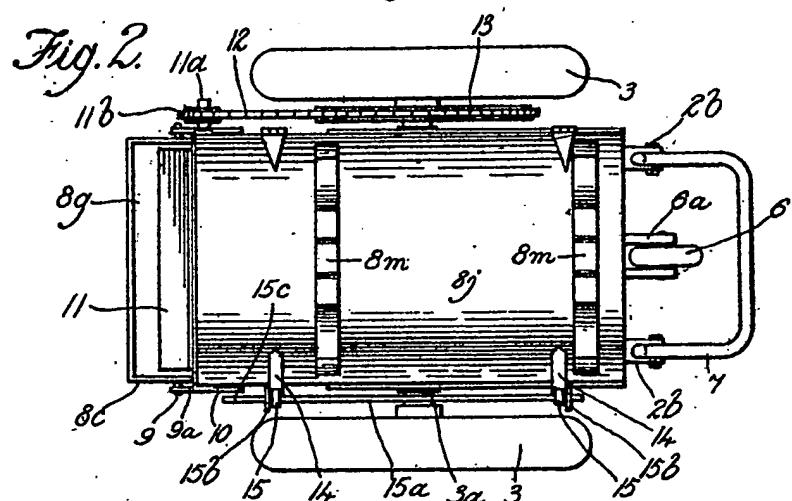
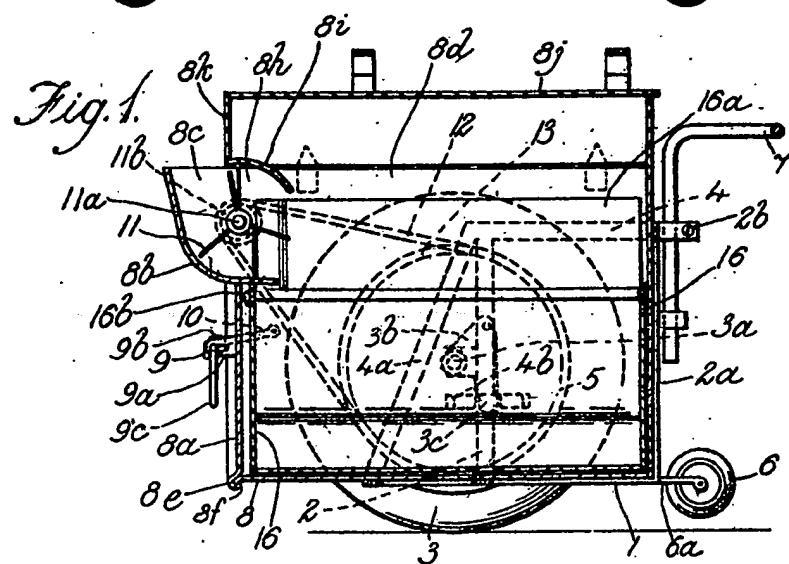
10. The improved street orderly truck, substantially as hereinbefore described with reference to the accompanying dia- 35 grammatic drawing.

Dated this 9th day of December, 1930.

F. J. CLEVELAND & Co.,
29, Southampton Buildings,
Chancery Lane, London, W.C. 2,
Agents for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcolmson, Ltd.—1931.

[This Drawing is a reproduction of the Original on a reduced scale.]



Family list

2 family members for:

GB376740

Derived from 2 applications.

- 1 **Improvements in anti-frictional ball bearings or supports**
Publication info: **FR739913 A** - 1933-01-19

- 2 **Improvements in anti-frictional ball bearings or supports**
Publication info: **GB376740 A** - 1932-07-13

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